20080130.ba v04_n140.bam.20080130

>From ???@??? Wed Jan 30 14:46:12 2008 -0600
Date: Wed, 30 Jan 2008 20:45:33 GMT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 4140
Message-Id: <20080130204534.77CFD4701C6@srvr1.theporch.com>

BOATANCHORS Digest 4140

Topics covered in this issue include:

1) Tuner ID
   by scb@hiwaay.net
2) Historic Radio - H. M. Wireless Station at Mount Pearl , Newfoundland
   by Jerry Proc <jerry7proc@yahoo.com>
3) Why 455?
   by Al Klase <al@ar88.net>
4) Re: [DVHRC] Why 455?
   by Al Klase <al@ar88.net>
5) Re: Why 455?
   by spr@earthlink.net
6) Re: Why 455?
   by "Sandy" <ebjr37@charter.net>
7) Re: Why 455?
   by Al Klase <al@ar88.net>
8) Fwd: 2E26's for sale
   by "Kim Herron" <kherron@voyager.net>
9) Johnson Viking Pacemaker
   by Mike Steussy <ae4r@cox.net>
10) Re: Johnson Viking Pacemaker
   by Bob Roehrig <broehrig@aurora.edu>
11) Re: Johnson Viking Pacemaker
   by Rodger <wq9e@dtnspeed.net>
12) Re: Johnson Viking Pacemaker
   by Bob Roehrig <broehrig@aurora.edu>
13) Getting Those Ferrying Command Radios OTA.
   by "David Stinson" <arc5@ix.netcom.com>
14) Electrolytic reforming question
   by Ralph Parker <rparker@dccnet.com>
15) Re: Electrolytic reforming question
   by "Al Parker" <anchor@ec.rr.com>

To: Old Tube Radios <boatanchors@theporch.com>
Subject: Tuner ID
Message-ID: <1201502925.479d7acd7afd9@webmail.hiwaay.net>

Date: Mon, 28 Jan 2008 00:48:45 -0600 (CST)
From: scb@hiwaay.net
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 8bit

Anyone have any idea what the tuner in my homebrew project rig is from? Had it kicking around the J.B. for years looking for a worthy app.
http://theradioboard.com/pix/steveb5.jpg
http://theradioboard.com/pix/steveb6.jpg
FWIW; The rig is a totally passive BCB reciever adapted from the January 2007 QST article HIGH SENSITIVITY CRYSTAL SET by Bob Culter, N7FKI. It uses a zero-bias FET pair as a self-synchronous switching detector. Clever and very effective

Thnx in advance; Steve B.

Date: Mon, 28 Jan 2008 18:20:36 -0500 (EST)
From: Jerry Proc <jerry7proc@yahoo.com>
Subject: Historic Radio - H. M. Wireless Station at Mount Pearl , Newfoundland
To: Old Tube Radios <boatanchors@theporch.com>
MIME-Version: 1.0
Content-Type: text/plain; charset=iso-8859-1
Content-Transfer-Encoding: 8bit
Message-ID: <115488.27607.qm@web90609.mail.mud.yahoo.com>

http://www.nfld.com/~sirjames/history.htm

--
Regards,
Jerry Proc
E-mail: jerry7proc@yahoo.com

Ask a question on any topic and get answers from real people. Go to Yahoo! Answers and share what you know at http://ca.answers.yahoo.com

---

Message-ID: <479F740A.1090905@ar88.net>
Date: Tue, 29 Jan 2008 13:44:26 -0500
From: Al Klase <al@ar88.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Why 455?
Content-Type: text/plain; charset=windows-1252; format=flowed
Content-Transfer-Encoding: 8bit

Every so often the question comes up: Why are all the IFís 455 KHz? Iíd like to get an article together that solves this riddle while the people who know are still with us. I know parts of the story, but I need help with a couple of issues.

There are two major consideration is the choice of the intermediate frequency used in a superheterodyne receiver. The lower the frequency, the easier it is to attain high selectivity. Also, in the early days, before tetrode and pentode tubes, it was easier to achieve a high degree of amplification at lower frequencies. Conversely, a higher IF frequency results in better image rejection.

Early superhets had the IF at 100KHz or lower in order to get adequate gain from the available triode tubes. They suffer severely from ìtwo-spot tuningî (images). By the early 1930ís, broadcast set had settled in at 175KHz, and automobile receivers would later adopt 262KHz as a standard.

The advent of the short-wave craze, and multi-band broadcast receivers dictated a higher IF frequency to achieve adequate image suppression on the short-wave bands. The broadcast band occupied 550-1500KHz at this time, and the designer encounters sever problems if his radio tunes across itís own IF. Some shortwave sets used 1600-1700KHz for better image rejection, but one couldnít go higher if the 160-meter ham band (1800-2000KHZ) was to be covered. Most multi-band receiver settled in near 450KHz, a comfortable distance from the first broadcast channel at 550KHz.

Questions:

Odd multiples of 5KHz, 455, 465, etc., were usually chosen so that the image of the carrier of a broadcast-band station could be zero-beat with the carrier of the station being tuned to achieve minimal interference. (This assumes 10KHz channel spacing. Did the Europeans (9KHz) do something else?)

The Radiotron Designers Handbook, Third Edition, p. 159, states ìA frequency of 455 Kc/s is receiving universal acceptance as a standard frequency, and efforts are being made to maintain this frequency free from radio interference.î

(1) Do FCC and international frequency allocations reflect this?

(2) Iíve heard the term ìClear-Channel IF.î Can anyone cite references?

(3) At lease one news group posting claims that broadcast frequencies in a particular market are assigned to prevent strong inter-modulation products from falling near 455KHz. Is this factual? Need reference.î

(4) Was this (3) at least part of the reason for ìRadio Moving Dayî in 1941? See: http://www.dcmemories.com/RadioMovingDay/032341WINXFreqChange.jpg

(5) Many National Radio sets used a 456KHz IFís and I think I remember a 437 somewhere. Why? Are there different considerations for short-wave CW operation?

Further input, corrections, and elaborations are greatly appreciated.
Scolarly reference will be looked upon with great favor.

Regards,
Al

--
Al Klase - N3FRQ
Flemington, NJ
http://www.skywaves.ar88.net/

Message-ID: <479F7744.5090607@ar88.net>
Date: Tue, 29 Jan 2008 13:58:12 -0500
From: Al Klase <al@ar88.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Boatanchors <boatanchors@theporch.com>,
 Boatanchors List <boatanchors@mailman.qth.net>,
 New Jersey Antique Radio Club <njarc@mailman.qth.net>
Subject: Re: [DVHRC] Why 455?
Content-Type: text/plain; charset=windows-1252; format=flowed
Content-Transfer-Encoding: 8bit

Sorry, the two "Moving Day" articles, one actually readable, are here:
http://www.dcmemories.com/RadioMovingDay/RadioMovingDay.html

Al Klase wrote:
> Every so often the question comes up: Why are all the IFís 455 KHz?
> Iíd like to get an article together that solves this riddle while the
> people who know are still with us. I know parts of the story, but I
> need help with a couple of issues.
>

--
Al Klase - N3FRQ
Flemington, NJ
http://www.skywaves.ar88.net/

```
Message-ID: <10671452.1201638157425.JavaMail.root@elwamui-
lapwing.atl.sa.earthlink.net>
Date: Tue, 29 Jan 2008 12:22:36 -0800 (GMT-08:00)
From: spr@earthlink.net
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Why 455?
Mime-Version: 1.0
Content-Type: text/plain; charset=UTF-8
Content-Transfer-Encoding: quoted-printable

Al,

I  see use of 455, 4456, 465, 470, and 472 in various European and American=
 radios that I own.

/scott

-----Original Message-----
>From: Al Klase <al@ar88.net>
>Sent: Jan 29, 2008 10:44 AM
>To: Old Tube Radios <boatanchors@theporch.com>
>Subject: Why 455?
>
>Every so often the question comes up: Why are all the IF=E2=80=99s 455 KHz=
? I=E2=80=99d=20
>like to get an article together that solves this riddle while the people=
=20
>who know are still with us. I know parts of the story, but I need help=20
>with a couple of issues.
>
>There are two major consideration is the choice of the intermediate=20
>frequency used in a superheterodyne receiver. The lower the frequency,=20
>the easier it is to attain high selectivity. Also, in the early days,=20
>before tetrode and pentode tubes, it was easier to achieve a high degree=
=20
>of amplification at lower frequencies. Conversely, a higher IF frequency=
=20
>results in better image rejection.
>
>Early superhets had the IF at 100KHz or lower in order to get adequate=20
>gain from the available triode tubes. They suffer severely from=20
>=E2=80=9Ctwo-spot tuning=E2=80=9D (images). By the early 1930=E2=80=99s, b=
roadcast set had=20
>settled in at 175KHz, and automobile receivers would later adopt 262KHz=20
>as a standard.
>
>The advent of the short-wave craze, and multi-band broadcast receivers=20
>dictated a higher IF frequency to achieve adequate image suppression on=20
```

```
>the short-wave bands. The broadcast band occupied 550-1500KHz at this=20
>time, and the designer encounters sever problems if his radio tunes=20
>across it=E2=80=99s own IF. Some shortwave sets used 1600-1700KHz for bett=
er=20
>image rejection, but one couldn=E2=80=99t go higher if the 160-meter ham b=
and=20
>(1800-2000KHZ) was to be covered. Most multi-band receiver settled in=20
>near 450KHz, a comfortable distance from the first broadcast channel at=20
>550KHz.
>
>Questions:
>
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>image of the carrier of a broadcast-band station could be zero-beat with=
=20
>the carrier of the station being tuned to achieve minimal interference.=20
>(This assumes 10KHz channel spacing. Did the Europeans (9KHz) do=20
>something else?)
>
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=20
>frequency of 455 Kc/s is receiving universal acceptance as a standard=20
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>from radio interference.=E2=80=9D
>
>(1) Do FCC and international frequency allocations reflect this?
>
>(2) I=E2=80=99ve heard the term =E2=80=9CClear-Channel IF.=E2=80=9D Can an=
yone cite references?
>
>(3) At lease one news group posting claims that broadcast frequencies in=
=20
>a particular market are assigned to prevent strong inter-modulation=20
>products from falling near 455KHz. Is this factual? Need reference.=E2=80=
=9D
>
>(4) Was this (3) at least part of the reason for =E2=80=9CRadio Moving Day=
=E2=80=9D in=20
>1941? See: http://www.dcmemories.com/RadioMovingDay/032341WINXFreqChange.j=
pg
>
>(5) Many National Radio sets used a 456KHz IF=E2=80=99s and I think I reme=
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>437 somewhere. Why? Are there different considerations for short-wave CW=
=20
>operation?
>
>Further input, corrections, and elaborations are greatly appreciated.=20
```

```
>Scolarly reference will be looked upon with great favor.
>
>Regards,
>Al
>
>--=20
>Al Klase - N3FRQ=20
>Flemington, NJ=20
>http://www.skywaves.ar88.net/
>

------------------------------
Message-ID: <009101c862b8$253c6a40$6bd29e18@gateway>
From: "Sandy" <ebjr37@charter.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Why 455?
Date: Tue, 29 Jan 2008 14:47:21 -0600
MIME-Version: 1.0
Content-Type: text/plain;
     format=flowed;
     charset="Windows-1252";
     reply-type=response
Content-Transfer-Encoding: 8bit

The only interference proble I have had with 455 khz. has been maritime
stations in the port of New Orleans using the old CW working frequency of
454 Khz.  This usually happened only if you lived close to the waterfront of
the Mississippi River in the city itself.  Occasionally a radio officer
would send last minute traffic to NY Slidell on that channel.  This was back
in the 40's and 50's.  When the 60's came along a lot of the messages that
were sent that way went via VHF marine channels or one of the old 2 Mhz AM
channels.  Nowadays it goes via satellite terminals or cell phones.  (Now no
problem as the CW channels o MF are all shut down.

73,

Sandy W5TVW
----- Original Message -----
From: "Al Klase" <al@ar88.net>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Tuesday, January 29, 2008 12:44 PM
Subject: Why 455?


> Every so often the question comes up: Why are all the IFís 455 KHz? Iíd
> like to get an article together that solves this riddle while the people
> who know are still with us. I know parts of the story, but I need help
> with a couple of issues.
```

>
> There are two major consideration is the choice of the intermediate frequency used in a superheterodyne receiver. The lower the frequency, the easier it is to attain high selectivity. Also, in the early days, before tetrode and pentode tubes, it was easier to achieve a high degree of amplification at lower frequencies. Conversely, a higher IF frequency results in better image rejection.
>
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>
> The advent of the short-wave craze, and multi-band broadcast receivers dictated a higher IF frequency to achieve adequate image suppression on the short-wave bands. The broadcast band occupied 550-1500KHz at this time, and the designer encounters sever problems if his radio tunes across itís own IF. Some shortwave sets used 1600-1700KHz for better image rejection, but one couldnít go higher if the 160-meter ham band (1800-2000KHZ) was to be covered. Most multi-band receiver settled in near 450KHz, a comfortable distance from the first broadcast channel at 550KHz.
>
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>
> Odd multiples of 5KHz, 455, 465, etc., were usually chosen so that the image of the carrier of a broadcast-band station could be zero-beat with the carrier of the station being tuned to achieve minimal interference. (This assumes 10KHz channel spacing. Did the Europeans (9KHz) do something else?)
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>
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```
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> Further input, corrections, and elaborations are greatly appreciated.
> Scolarly reference will be looked upon with great favor.
>
> Regards,
> Al
>
> --
> Al Klase - N3FRQ Flemington, NJ http://www.skywaves.ar88.net/
>
>
>
> --
> No virus found in this incoming message.
> Checked by AVG Free Edition. Version: 7.5.516 / Virus Database:
> 269.19.15/1249 - Release Date: 1/29/2008 9:51 AM
>
>

------------------------------
Message-ID: <479F95A6.3060301@ar88.net>
Date: Tue, 29 Jan 2008 16:07:50 -0500
From: Al Klase <al@ar88.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Why 455?
Content-Type: text/plain; charset=windows-1252; format=flowed
Content-Transfer-Encoding: 7bit

Sandy,

Thanks for the first-hand input.  I'd sorta remembered talk of a
maritime freq. close to 455.  I wonder if this has any bearing on
National, and Zenith (recently pointed out to me), sneaking up to 456.

73,
Al

Sandy wrote:
> The only interference proble I have had with 455 khz. has been
> maritime stations in the port of New Orleans using the old CW working
> frequency of 454 Khz.  This usually happened only if you lived close
> to the waterfront of the Mississippi River in the city itself.
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> Slidell on that channel.  This was back in the 40's and 50's.  When
> the 60's came along a lot of the messages that were sent that way went
> via VHF marine channels or one of the old 2 Mhz AM channels.  Nowadays
> it goes via satellite terminals or cell phones.  (Now no problem as
> the CW channels o MF are all shut down.
>
> 73,
>
> Sandy W5TVW
>
>

--
Al Klase - N3FRQ
Flemington, NJ
http://www.skywaves.ar88.net/

------------------------------
MIME-Version: 1.0
Date: Tue, 29 Jan 2008 19:10:56 -0500
From: "Kim Herron" <kherron@voyager.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Fwd: 2E26's for sale
Content-Type: text/html; charset="ISO-8859-1"
Content-Transfer-Encoding: quoted-printable
Message-Id: <20080130001107.9D5043FEC@webmailsmtp2.localnet.sys>

<p><pre>
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

***************************************************
*          To the SENDER of this email:           *
*-------------------------------------------------*
* Please don't use HTML tags or 'rich text' here. *
*       Set your emailer to turn that off.        *
***************************************************
</pre><p>
<p>Me again Gang!! </p><p>This one's simple. I have a BUNCH of 2E26's (and =
3 2E24) for sale. $2.00 ea. These tubes don't have boxes, as most appear to=
 have been bulk packed tubes. That means that they came in cases of 144 tub=
es and nothing had individual boxes. A lot of these tubes have JAN markings=
 on them. They make great low power replacements for 6146's in Heathkit or =
Johnson transmitters. All of them have been across the Hickok 533A and if t=
hey didn't test at new spec (3500 gM), I called them used and pitched them.=
 Anything shorted or gassy got the same treatment. I still have somewhere b=
etween 40 and 60 of them. As I said above $2.00 ea. Buy 15 or more and I'll=
 ship them free. </p><br />
-- <br />
Thanks!!<br />
```

Kim Herron<br />
1-616-677-3706<br />
1-616-204-5122 cell<br />
CoreComm Webmail. <br />
http://home.core.com

Message-ID: <479FD95C.4060502@cox.net>
Date: Tue, 29 Jan 2008 20:56:44 -0500
From: Mike Steussy <ae4r@cox.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Johnson Viking Pacemaker
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

Ahoy! I don't have a Viking Pacemaker, but one may be available soon. Please advise your experience, opinions and advice concerning owning and operating (SSB & CW) one of these apparently uncommon transmitters.

Thanks & 73,
Mike Steussy AE4R

Date: Tue, 29 Jan 2008 20:16:17 -0600 (CST)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Johnson Viking Pacemaker
Message-ID: <Pine.LNX.4.61.0801292011020.28672@hermes.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII; format=flowed

On Tue, 29 Jan 2008, Mike Steussy wrote:

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> Please advise your experience, opinions and advice concerning owning and
> operating (SSB & CW) one of these apparently uncommon transmitters.

I had one back around 1962. It was a great rig. There was a mod in QST that I applied to mine which involved installing a second 6146 in the final to double the power. It was a fairly simple mod requiring moving the plate tuning cap forward to the front of the final compartment (and cutting off some of the long shaft), paralleling the meter shunt for the plate current metering, and of course adding another octal socket. The new socket was paralleled with the original with the addition of appropriate grid and plate parasitic chokes. The power supply handled it just fine since that transformer was also used in a larger one of the Johnson transmitters.

Bob Roehrig
Aurora University   Telecom dept.
broehrig@aurora.edu
K9EUI W9ZGP WD2XSH/19
630-844-4898   fax 630-844-4222
"Nostalgia is a thing of the past"

Message-ID: <479FE16A.1030807@dtnspeed.net>
Date: Tue, 29 Jan 2008 20:31:06 -0600
From: Rodger <wq9e@dtnspeed.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Johnson Viking Pacemaker
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit

Hi Mike and list,

I put together a Pacemaker/Thunderbolt station a couple of years ago (using an RME-6900 for receive) and I have it on the air a few times a month. The Pacemaker seems to have a bad reputation but the only thing I did to mine was replace some electrolytic capacitors, replace the VR tube dropping resistor (the same undersized unit as used in Rangers and Valiants), clean the controls, and do a complete alignment. It works fine and seems to hold adjustment as well as any phasing rig I have used (which means every couple of years you probably will need to do a little touch up).

I do have a spectrum analyzer plug-in for my 7000 series Tektronix scopes so it does make the phasing setup easy to adjust. When these vintage phasing transmitters were common receiver selectivity was often questionable so the setup instructions are written with the thought of using a scope for adjustment. However, many transmitter maladies will cause similar scope patterns and this can make adjustment frustrating. If you don't have access to a spectrum analyzer I would suggest using a modern selective receiver and you can use this to null the carrier and the undesired sideband and this is much easier to do than using a basic scope display (but not quite as easy as with a spectrum analyzer). You will also be immediately aware of any hum or noise on the signal which would also make the scope pattern quite difficult to analyze.

Don't let people discourage you from trying this transmitter. I have a feeling a lot of the naysayers have not really given it a good try and I doubt that I have the only good Pacemaker transmitter out there. Unfortunately there is a lot of misunderstanding of some rigs, a common example is people removing all of the clipping components out of Valiants because "they sound so bad". A quick look through the Valiant manual will indicate that turning the clipper control full clockwise reduces clipping to zero thus the circuit has no real effect. However I think a lot of folks never read the manual and assume that turning the control full CCW must be the "off" position and they end up transmitting with around 30 db of clipping which does sound truly horrible. Before I added some of the higher power AM rigs (the Desk KW and recently a Viking 500) I used the Valiant as my main AM transmitter and on a few occasions dialing in a little clipping made a significant difference in getting words (instead of just a carrier) through to other stations.

I must admit a bias towards Johnson rigs, my novice transmitter was a Valiant and a now own a Viking 1, Viking 2, Ranger 1/Desk Kilowatt combo, Ranger 2, a couple of Valiants, a Challenger, an Adventurer, and the Pacemaker/T-bolt combo. If you have any questions I will be happy to help.

73, Rodger WQ9E

Mike Steussy wrote:
> Ahoy! I don't have a Viking Pacemaker, but one may be available
> soon. Please advise your experience, opinions and advice concerning
> owning and operating (SSB & CW) one of these apparently uncommon
> transmitters.
> Thanks & 73,
> Mike Steussy AE4R
>
>
>

Date: Tue, 29 Jan 2008 20:39:55 -0600 (CST)
From: Bob Roehrig <broehrig@aurora.edu>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Johnson Viking Pacemaker
Message-ID: <Pine.LNX.4.61.0801292039300.1258@hermes.aurora.edu>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII; format=flowed

On Tue, 29 Jan 2008, Mike Steussy wrote:

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I had one back around 1962. It was a great rig. There was a mod in QST that I applied to mine which involved installing a second 6146 in the final to double the power. It was a fairly simple mod requiring moving the plate tuning cap forward to the front of the final compartment (and cutting off some of the long shaft), paralleling the meter shunt for the plate current metering, and of course adding another octal socket. The new socket was paralleled with the original with the addition of appropriate grid and plate parasitic chokes. The power supply handled it just fine since that transformer was also used in a larger one of the Johnson transmitters.

Bob Roehrig
Aurora University   Telecom dept.
broehrig@aurora.edu
K9EUI W9ZGP WD2XSH/19
630-844-4898   fax 630-844-4222
"Nostalgia is a thing of the past"

Message-ID: <004d01c86353$c37b1d00$6401a8c0@boudreaux>
From: "David Stinson" <arc5@ix.netcom.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Getting Those Ferrying Command Radios OTA.
Date: Wed, 30 Jan 2008 09:21:15 -0600
MIME-Version: 1.0
Content-Type: text/plain;
     format=flowed;
     charset="iso-8859-1";
     reply-type=original
Content-Transfer-Encoding: 7bit

Ya'll know that the little Ferrying Command and WASP radios are a special interest of mine. I have several complete sets and would like to use them on the air.
Most of these sets transmit on 3 MC, but receive on Longwave.
So I finally got enough time to work out the kinks in a simple converter that will allow me to use the sets on the "AM Ghetto" of 3880-3890 KC.

The converter uses a color burst xtal to bring 3880 KC down to about 300 KC. It only has one tuned circuit, so images from the 3 MC broadcast band are in there, but they aren't a big enough problem to warrant spending the few minutes I get to tinker fighting them. This level of images is a fair trade-off for time and simplicity.   Besides- listening to the preacher rants and CHU are fun, and the "AM Ghetto" is clear of images.

Here's the circuit:

http://home.netcom.com/~arc5/converter.JPG

If you prefer no images, you can build a better input circuit.
If you do, let us know how you come out.
The hardest part was getting the input coil and cap right.
Grid dipper and spec analyzer did the trick.

If you decide to build the converter, you can adjust the
B+ input resistor for whatever voltage you have.
If 6-volts, run it direct without the resistor.
If 24 volts, you'll need to go higher (I haven't tried that yet).
Use a 10K pot or something and go up slowly, because
voltages over about 9 will zap the chip. If you have NE602,
SA602 or SA612, they will all work and are identical for hook-up.
I run the +12 volt input through my PTT circuit, so it turns the
converter off during transmit.
Next step is to convert a 150 watt CB "Lean-Yar"
brick to 75 meters. Not all that hard, with this one.
Perhaps you will be hearing my 150 watt WASP radio soon :-).

73 Dave S.

Message-Id: <3.0.6.32.20080130121646.00b14c38@pop3.dccnet.com>
Date: Wed, 30 Jan 2008 12:16:46 -0800
To: Old Tube Radios <boatanchors@theporch.com>
From: Ralph Parker <rparker@dccnet.com>
Subject: Electrolytic reforming question
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

I limped through the last CX with a sort-of working NC-303, and thought I'd
best take it out of the cabinet and have a look. A PO had sloppily
installed four tubular electrolytics to replace the 4-in-1 can. Time to
return it to more-or-less original.

I have a couple of NOS cans that are probably 30 years old, either of which
would do the trick (40-40-40/450). I put one on my Heath IT-28 for
reforming, in series with a VOM to watch the current. All sections came up
nicely, with a final leakage current of less than 1ma @ 450v for each section.

The question: can I confidently install this without worry, or should I
wait for new caps to arrive and rebuild the original can?

I have previously put a 250ma fuse in the CT of the HV winding to save the
xformer, just in case. I'll do that with the '303 too.

Then I'll attend to the other issues - poor AGC, audio distortion, etc.

VE7XF

Message-ID: <07d201c86380$fc23d6b0$6401a8c0@reloaded>
From: "Al Parker" <anchor@ec.rr.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Electrolytic reforming question
Date: Wed, 30 Jan 2008 15:45:00 -0500
MIME-Version: 1.0
Content-Type: text/plain;
     format=flowed;
     charset="iso-8859-1";
     reply-type=original
Content-Transfer-Encoding: 7bit

Hi 'Cousin' Ralph,

Nice to chat with you on CX, your Valiant sounded fine. I didn't hear a problem with your NC-303 ;-)   I found that my Invader 2000 got good response from CQ's, my Valiant did OK too. Qualified 5 rigs, a high for me, thanks to planning ahead. I had to change out the elecrolytic in my 2-B as it didn't know the music when I checked it out Sat. (it just hummed).

I've gotten to be suspicious of old NOS electrolytics since I've found it's not too hard to restuff them properly. But I've left old ones in a few things, notably SP-600's, as their originals rarely test bad for me, but only if it's mine. If I'm working on somebody else's stuff I don't do that. If it's mine and it goes, I can recognize & fix it, if it's somebody else's he might not realize it's going bad, and would have to get it back to me to fix. And hopefully no damage done, except to my pride in workmanship.

I've reformed some, had mixed success. "They" say that the electrolyte can dry out over the yrs, even if not used. Some have even injected distilled water, I haven't tried.

Your mileage may vary.

Hope to see you on fone CX in 2 wks
73,
Al, W8UT
New Bern, NC
www.boatanchors.org
www.hammarlund.info

----- Original Message -----
From: "Ralph Parker" <rparker@dccnet.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Wednesday, January 30, 2008 3:16 PM
Subject: Electrolytic reforming question

>I limped through the last CX with a sort-of working NC-303, and thought I'd
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> VE7XF
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End of BOATANCHORS Digest 4140
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